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kukal li. kiheung up. yongin city, Kyungki do 449-900 (KR).

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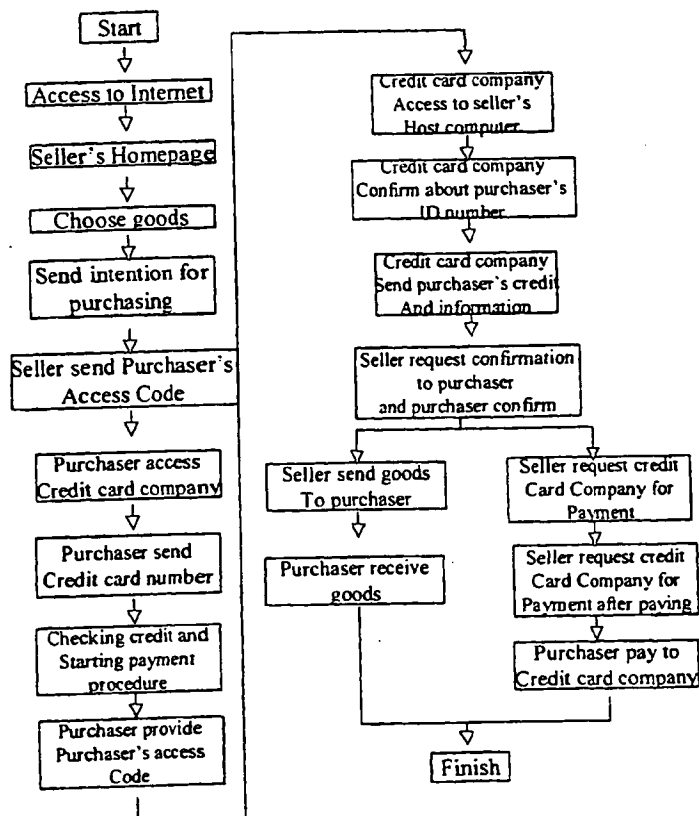
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(71) Applicant and

(72) Inventor: PARK, Chul [KR/KR]; 701 Hanyang Apt., 396.

(54) Title: INTERNET TRADE ENHANCING PURCHASER'S SECURITY



(57) Abstract: A secure method for purchasing goods through an electronic media such as internet using credit card number for a payment for internet trade. When a customer accesses to a certain shopping mall through internet deciding to purchase some goods, the computer in shopping mall generates customer identification number which comprises the online internet address of this computer and location of the saved data which contains the information of the goods which the customer chose to purchase. After receiving this identification number, the customer accesses to the computer of credit card company through internet and informs his credit card number and security number. After confirmed credit, the customer sends the customer identification number to the computer of credit card company. With this customer identification number, the credit card company contacts the shopping mall through online and confirm about the customer's credit and finally pays for the goods on behalf of the customer.

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Internet trade enhancing purchaser's security

Technical Field

A secure method for payment procedure for purchasing goods through an electronic media such as internet using credit card number is provided. The customer will send his credit card number to the credit card company instead of shopping mall so that to reduce the risk of disclosure of his credit card to uncertain several shopping mall.

Background Art

The most popularly used payment method for the internet trade is using credit card number.

Followings are the process of payment system in internet with flow chart.

In Fig. 1, it is shown the payment system commonly used.

In Fig. 2, there is shown the flow chart of payment system in internet using credit card.

As shown in Fig. 1, the internet trade comprises the purchaser(1) and seller(2) and credit card company(3).

In the below, the customer will be indicated as purchaser because in this invention the payment procedure will occur when the customer will connect to internet to purchase some goods.

Also the special feature of internet trade is that the contract is occurred via internet.

In this invention, the purchaser means the person or company or organization who would like to purchase something. The seller means
5 who will sell something after order from purchaser. The object for the selling can be the real goods or services or information or some other things which can be the object for the trade and accompanying payment.

And the credit card company implies the company who supervise
10 every payment system using credit card.

The host computer of credit card company means the computer which includes the information of clients, including purchaser and seller, and which supervise the transfer of money in each side.

And the internet address is the address of computer which can be
15 accessed using internet or other network electronic signal line or other electronic media such as wire less telecommunication.

In Fig. 2, there is shown the flow chart of internet trade.

The purchaser who would like to purchase something through internet to start(S1) purchasing will access to internet(S2) using purchaser's
20 computer. And the purchaser will choose to access(S3) the seller's internet homepage(2). The purchaser will choose the goods(S4) to purchase.

After choosing the goods he would like to purchase, the purchaser will send his intention to purchase to seller through internet(S5). In this case, the purchaser will fill up the document required from seller.

5 The seller's host computer will request the information of purchaser including name, address for the delivery, the way of payment and etc. (S6)

Purchaser will fill up these information deciding way of payment(S7).

10 When the purchaser decide to pay with credit card, the seller's host computer request to fill up credit card number with additional necessary information through internet.(S8)

The purchaser will input his credit card number with additional information requested in his computer and send these information through internet. (S9)

15 After this status, the contract between purchaser and seller is finished so that the seller received the reservation for the purchasing and information for the payment.

The purchaser can disconnect with seller's host computer, i.e. he can move from the seller's homepage, after this process.

20 The seller inquire the purchaser's credit to credit card

company(3) with purchaser's credit card number following the request for the payment for the goods.(S10)

The credit card company pay for the goods on behalf of purchaser after confirming his credit.

5 In parallel with this process or after confirming credit, the seller will send the goods requested by the purchaser(S11) and the purchaser will receive these goods(S12). The credit card company will pay to the seller about the goods.(S13)

The credit card company will request payment to the purchaser
10 about this trade after some terms(S14).

The purchaser will pay to the credit card company through direct remittance or transferring from bank account or other way. (S15)

The trade via internet will finish after this payment.(S16)

15 Using this kind of internet trading, the purchasers can purchase easily the goods what he wants and the sellers can sell their goods through internet safely.

Disclosure of Invention

But the internet trade described above has many problems.

At first, the purchaser should input his credit card number to the
20 seller's host computer. As there are so many shopping mall, the purchaser's credit card number will be known to too many sellers.

At second, in internet trade using credit card, the purchaser cannot input his secret number because of security. In the result, anybody who knows the purchaser's credit card number can illegally

use the purchaser's credit card for purchasing goods using internet.

At third, the purchaser should fill up lots of his information including phone number, delivery, social security card number etc to each shopping mall.

5 At fourth, there is delay of confirming of purchaser's credit because of the after processing for the credit inquiry.

So this invention provide the solution for the above mentioned problem.

For the internet trade, according to this invention, the seller's
10 host computer generates purchaser's access code for each trade.

The purchaser's access code can be notified as customer identification number because it can be used to identify purchaser, i.e. the customer.

Purchaser's access code consists of purchaser's temporary
15 identification number and online internet address of seller's host computer.

Purchaser's temporary identification number is the specific account number for the purchaser which composes with character or number.

20 The purchaser's temporary identification number is automatically generated after decision of purchasing of goods for the purchaser by the seller's host computer.

Using purchaser's identification number, the seller's host computer can identify the location of the saved data which contains the information of the goods for which the purchaser chose to purchase.

Using the purchaser's identification number, it is possible for
5 the seller's host computer to write and read data for specific purchaser.

Seller's host computer has the database for the information for the purchaser who decided and confirmed to purchase the goods which can be searched using purchaser's temporary identification number.

10 The internet address of seller's host computer is the address for the seller's host computer which can be accessed by the host computer of credit card company.

The internet address of seller's host computer includes the internet address of seller's computer which contain the information
15 of purchaser's decision for purchasing which can be accessed by host computer of credit card company.

The seller's host computer will save the purchaser's information in each files or in some database file.

The file notified above is the excel file or HTML file or some
20 other format of file which can be opened and readable and writable in specified software.

The purchaser's temporary identification number is the key account to search the information for the goods which is saved in seller's host computer in specific files or in database.

After receiving the purchaser's access number from the seller's
5 host computer via internet, purchaser will access to the homepage of credit card company through internet.

As the host computer of credit card company request to the purchaser, the purchaser will input his credit card number and secret number.

10 The host computer of credit card company will check the credit of the owner of this credit card. After confirming the credit, the host computer inform to the purchaser through internet to proceed next step.

The purchaser will provide the the purchaser's access number to
15 the host computer of credit card company using his computer through internet using his computer.

The host computer of credit card company has the information about the purchaser which was saved previously about the purchaser's home address for the goods delivery, and other information for internet
20 trade.

If the purchaser would like to send the goods to other address.

then he can input it in this stage.

Also the purchaser can input the address for the delivery when the seller request for it.

The host computer of credit card company will access to the host
5 computer of seller referring the internet address of seller's host
computer from the purchaser's access code.

Also the host computer of credit card company send the purchaser's
temporary identification number to the seller's host computer.

After receiving the purchaser's temporary identification number
10 the seller's host computer will search the number in the database or
in files.

After confirming the purchaser's temporary identification number,
the seller's host computer will check the goods which the purchaser
ordered and calculate the total price including delivery fee, tax,
15 etc.

The host computer of credit card company send the information of
purchaser about the credit for payment and address of delivery, etc.

The seller will continue sending goods and asking payment to
credit card company and other necessary steps on the base of this
20 confirming and information from credit card company.

The advantage of using purchaser's access code is that the

purchaser can send his purchasing information to credit card company directly. As he will only input his credit card number and security number to the host computer of credit card company directly, he can prevent the risk of opening his credit card number to shopping mall.

- 5 Also as the purchaser access to credit card company directly, he can input secret number of credit card. So the security of purchaser's credit card is protected.

Brief Description of Drawings

Fig.1 is block diagram illustrative the process of purchasing and
10 payment system through internet.

Fig.2 is flow chart of conventional internet trade and internet payment system.

Fig. 3 is the flow chart of internet trade and internet payment system provided by this invention.

15 Best Mode for Carrying Out the Invention

The flow of the internet trade following this invention is provided below as shown in Fig. 3.

The purchaser will turn on the computer to start(S17) and access to internet(S18) using web browser. After accessing a certain
20 seller's homepage(S19) which means a certain internet shopping mall, he chooses the goods what he wants to purchase(S20).

After choosing the goods he wants to purchase, the purchaser express his intention to purchase by clicking certain buttons as indicated seller's homepage(S21).

5 Seller's host computer which is conducting every procedure for the internet trade will check the goods which the purchaser has chosen and confirm the intention for purchasing. After confirming, the seller's host computer generates the purchaser's access code and send it to the purchaser's computer who is still connecting the seller's homepage.(S22)

10 The seller's host computer means the computer which conduct every procedure for the internet trade.

The purchaser's access code consists of purchaser's temporary identification number and internet address of seller's host computer. The purchaser's temporary identification number is the specific
15 account number for the purchaser which is composed with characters or numbers.

The purchaser's temporary identification number is automatically generated after decision of purchasing of goods for the purchaser by the seller's host computer.

20 Seller's host computer has the database for the information for the goods which the purchaser has chosen to purchase and the

purchaser who decided and confirmed to purchase the goods

The database can be searched using purchaser's temporary identification number.

The internet address of seller's host computer is the online
5 address for the seller's host computer which can be accessed by the
host computer of credit card company.

For example, if the internet address of the company named
audioworld is www.audioworld.com, also if the purchaser's temporary
identification number is "123", then the purchaser's access code can
10 be www.audioworld.com::123.

If the internet address of seller's homepage for the internet
payment system between credit card company and seller is in the
directory named www.audioworld.com/credittrade , and also if the
purchaser's temporary identification number is "123", then the
15 purchaser's access code can be www.audioworld.com/credittrade::123.

If they do not use special characters for dividing, they can input
the internet address of seller's homepage and the purchaser's
temporary identification number separately.

The internet address of seller's host computer can be any kind of
20 address if this address can be known and accessed by the host
computer of credit card company. In this case internet payment system

should work between two computers.

The internet address of seller's host computer can be registered in host computer of credit card company with other registered code. The seller's host computer can use this registered code for the
5 purchaser's access code because this registered code can be used as internet address for access by host computer of credit card company.

After receiving the purchaser's access number from the seller's host computer via internet, purchaser will access to the homepage of internet card company.(S23)

10 As the host computer of card company request to the purchaser, the purchaser will input his credit card number and secret number.(S24)

After checking the credit of purchaser using credit card number and secret number, host computer of credit card company send the message for starting payment procedure.(S25)

15 The purchaser will provide the the purchaser's access number to the host computer of credit card company through internet using his computer. (S26)

For example, he will input www.audioworld.com::123.

The host computer of credit card company discriminate the internet
20 address of seller's homepage and the purchaser's temporary identification number using these specific characters.

The host computer of credit card company will access to the host computer of seller referring the internet address of seller's host computer from the purchaser's access code.(S27)

After connecting with seller's host computer, the host computer of
5 credit card company will confirm about the purchaser using purchaser's temporary identification number.(S28) After confirming, the host computer of credit card company sends the information for the credit of purchaser and the purchaser's name, address for goods delivery, etc.(S29)

10 The seller's host computer can send the request for the correctness directly to purchaser's computer and the purchaser can send confirming.(S30)

In this case, the purchaser's computer is still connecting with the seller's homepage with additional web browser window.

15 After this step, the real contract between purchaser and seller is confirmed.

The purchaser can disconnect with seller's homepage after this step.

The seller request for the payment to the credit card company
20 through internet or other online request.(S33)

Also the seller send goods to purchaser.(S31)

The purchaser will receive the goods.(S32)

And the credit card company pay to seller on behalf of purchaser and request for the payment to the purchaser.(S34)

The purchaser will pay to the credit card company.(S35)

5 After this step, the internet trade will be finished.(S36)

As described above, the purchaser send information separately to seller and credit card company.

The advantage of using purchaser's access code is that the purchaser can send his purchasing information to credit card company 10 directly. As he will input his credit card number and security number only to the host computer of credit card company directly, he can prevent the risk of opening his credit card number to shopping mall.

Also as the purchaser access to credit card company directly, he can input secret number of credit card. So the security of 15 purchaser's credit card is protected.

Another application of this invention is using telephone. After receiving the purchaser's access code from the seller's host computer, the purchaser can send this access code to credit card company using telephone.

20 When the purchaser is using telephone, the purchaser's access code is composed of numbers and characters which can be input using

telephone.

If the purchaser is using telephone, his security protected more safely.

Another application of this invention is the purchaser can use his
5 bank account instead of his credit card.

After receiving the purchaser's access code from seller's host
computer, the purchaser connect to the bank in internet. And he will
input the account number and security number for his account. After
this, he will send the purchaser's security code to the host computer
10 of bank through internet.

The host computer of bank will check the purchaser's account. If
there are sufficient money in the purchaser's account, the host
computer of bank will connect to seller's host computer to finish the
payment with the same processing described above in case of credit
15 card.

Another application for this invention is using intermediate host
computer. Intermediate host computer is owned by another certified
company for payment system for internet trade.

Intermediate host computer mediate the credit confirming and
20 payment system between purchaser and credit card company.

In this case, the purchaser will send the purchaser's access code
to this intermediate host computer instead of that of credit card

company.

Then intermediate host computer will check the purchaser's credit by connecting the host computer of credit card company. If the purchaser's credit is certified, the intermediate host computer will
5 connect to the seller's host computer using purchaser's access code to confirm the trade.

The intermediate host computer can register the purchaser previously as member with purchaser's information such as name, address for delivery, etc.

10 The advantage for this system is that it makes it possible to save the investment for the hardware and software installation for the internet banking system following this invention.

For the intermediate host computer, it can also use bank account instead of credit card.

15 To enhance the purchaser's convenience, when the purchaser's access code is input to purchaser's computer, the web browser can automatically connect to the homepage of credit card company. The purchaser can choose manual connect or automatic connect to host computer of credit card company.

20 To enhance security, the seller's host computer check the address of host computer of credit card company for the correctness of information for payment credit when the host computer of credit card

company connected to seller's host computer.

The encryption of the data transfer can be applied using well known encryption method.

Using the purchaser's access code, it gives the purchaser better
5 chances for internet shopping.

As the process for the internet trading in this invention will work when purchaser send the purchaser's access code to host computer of credit card company or host computer of bank, the purchaser has the right to send or to abandon the access code after checking
10 specification for goods.

So the purchaser can access to many different internet shopping mall for the same or similar goods.

When the seller's host computer send the purchaser's access code after choosing the goods, the seller's host computer can attach the
15 files in database format for the information for the goods for which the purchaser has chosen.

The purchaser can receive these information files from several different internet shopping malls. The purchaser's access code is also different from each internet shopping mall.

20 The purchaser can compare the conditions for the goods, for example, the price, the delivery, warranty, etc.

When the purchaser has chosen the best conditions for the goods from the specific internet shopping mall, he can send the purchaser's access code from this shopping mall to the host computer of credit card company or host computer of bank.

- 5 Also the information for the goods from the seller which came with purchaser's security code can be used for checking the goods after the purchaser received the goods.

The other use of purchaser's access code is that using purchaser's access code makes it possible to use personal identification number 10with security number instead of using credit card number or bank account directly.

Personal identification number is made of characters or numerical numbers as well used. This purchaser's personal identification number is registered to the host computer of credit card company or bank. 15This purchaser's personal identification number registered in credit card company is related with purchaser's credit card number. So the purchaser can access to the host computer of credit card company with his identification number to follow the process the internet trade as described in this invention. When the host computer of credit card 20company received the purchaser's identification number and following security number and with purchaser's access code, it search for the

credit card number in database which is matched with this purchaser's identification number. After searching for the credit card number, the host computer of credit card company will continue the internet payment system using purchaser's access code with seller's host
5 computer.

The advantage of using purchaser's identification number instead of credit card number directly is that it will reduce the risk of credit card number known to other person.

For the bank account instead of credit card, the purchaser's
10 identification number can be used also.

At first, the advantage of using purchaser's access code is that the purchaser can send his purchasing information to credit card company directly. As he will only input his credit card number and security number to the host computer of credit card company directly,
15 he can prevent the risk of opening his credit card number to shopping mall. Also as the purchaser access to credit card company directly, he can input secret number of credit card. So the security of purchaser's credit card is protected.

At second, the other advantage using purchaser's access code is that
20 as the host computer contact directly to the seller's host computer, the confirmation for the purchaser's credit is informed quickly to seller's host computer to continue the internet trade and delivery.

At third, the host computer of credit card company will send also the delivery information for the purchaser to the seller's host computer. In this case, the purchaser do not need to input his delivery information to the seller's host computer in each
5 purchasing.

At fourth, as the purchaser can get different information for the same or similar goods from different shopping malls in addition to different purchaser's access code, he can compare each specifications including price before sending purchaser's access code.

Claims

1. A method and procedure for payment system of purchasing goods through internet, comprising :

0 The step for method and procedure that purchaser turn on
5 the computer and access to internet using web browser,
connecting to a certain seller's homepage and choosing the
goods for purchasing.

0 The step for method and procedure that the seller's host
computer generates the purchaser's access code and send it to
10 the purchaser's computer who is still connecting the seller's
homepage.

0 The step for method and procedure that purchaser access to
the homepage of internet card company and input his credit card
number and secret number as requested.

15 0 The step for method and procedure that the host computer
of credit card company check the credit of purchaser using
credit card number and secret number, confirming for the credit
to purchaser to start payment procedure.

0 The step for method and procedure that the purchaser
20 provide the the purchaser's access number to the host computer
of credit card company through internet using his computer.

0 The step for method and procedure that the host computer of credit card company access to the host computer of seller referring the internet address of seller's host computer from the purchaser's access code.

5 0 The step for method and procedure that the host computer of credit card company confirm about the purchaser using purchaser's temporary identification number.

10 0 The step for method and procedure that the host computer of credit card company sends the information for the credit of purchaser and the purchaser's name, address for goods delivery.

15 0 The step for method and procedure that after receiving the purchaser's temporary identification number ,the seller's host computer search the number in the database or in files checking the goods which the purchaser ordered and calculate the total price including delivery fee, tax.

0 The step for method and procedure that the seller's host computer send the request for the correctness directly to purchaser's computer for the purchaser's confirming.

20 0 The step for method and procedure that the seller request for the payment to the credit card company through internet or other online request.

- The step for method and procedure that the seller send goods to purchaser.

- The step for method and procedure that the purchaser receive the goods.

5 ● The step for method and procedure that the credit card company pay to seller on behalf of purchaser

- The step for method and procedure that the credit card company request for the payment to the purchaser.

10 ● The step for method and procedure that the purchaser will pay to the credit card company.

2. A method and procedure for payment system of purchasing goods through internet of claim 1 using purchaser's access code comprising :

15 ● purchaser's temporary identification number with which seller's host computer search the saved data in database for the information for the goods for the purchaser has chosen to purchase.

20 ● internet address of seller's host computer with which the host computer of credit card company access to seller's host computer.

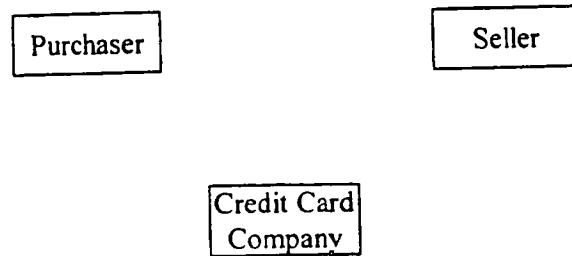
3. A method and procedure for payment system of purchasing goods through internet of claim 1 with the format of purchaser's access code wherein the internet address of seller's homepage and the purchaser's temporary identification number are divided by special
- 5 characters.
4. A method and procedure for payment system of purchasing goods through internet of claim 1 for connection with host computer of credit company, the purchaser choose manual connect or automatic connect when the purchaser's access code is input to purchaser's
- 10 computer by the web browser to the homepage of credit card company.
5. A method and procedure for payment system of purchasing goods through internet of claim 1 with the format of purchaser's access code wherein there is attached the files in database format for the information for the goods which the purchaser has chosen.
- 15 6. A method and procedure for payment system of purchasing goods through internet of claim 5 with the databases for goods from several different shopping mall attached to purchaser's access code : wherein it is used to compare goods for final decision to send it to host computer of credit card company.

7. A method and procedure for payment system of purchasing goods through internet of claim 1 wherein intermediate host computer mediate the credit confirming and payment system between purchaser and credit card company.
- 5 8. A method and procedure for payment system of purchasing goods through internet of claim 1 wherein the seller's host computer check the address of host computer of credit card company for the correctness of information for payment credit when the host computer of credit card company connected to seller's host computer.
- 10 9. A method and procedure for payment system of purchasing goods through internet of claim 1 wherein purchaser send purchaser's access code to the host computer of bank with his bank account number and security for payment.
10. A method and procedure for payment system of purchasing goods
- 15 through internet of claim 1 wherein personal identification number with security number instead of using credit card number or bank account directly is registered and used.
11. A method and procedure for payment system of purchasing goods through internet of claim 9 where in telephone or internet is used
- 20 for connection to credit card company or bank or intermediate company.

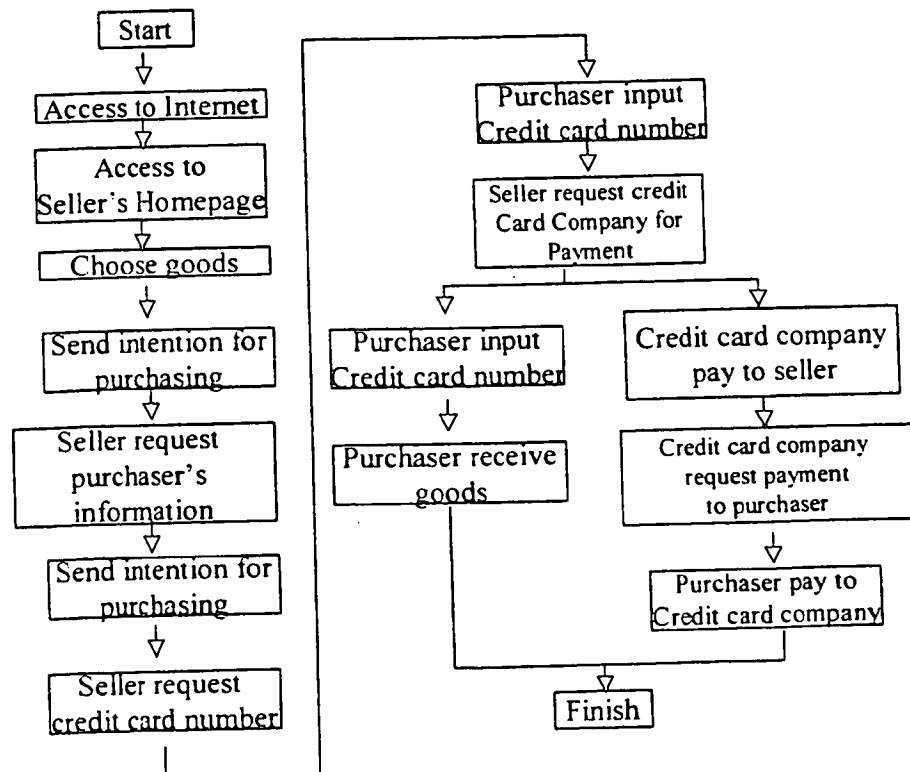
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【Figure】

【Fig. 1】



【Fig. 2】



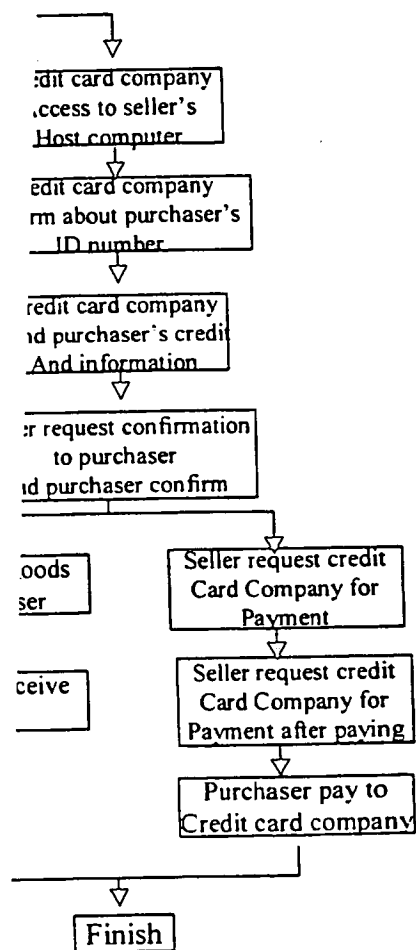
for payment system of purchasing goods
 wherein intermediate host computer
 ing and payment system between purchaser

for payment system of purchasing goods
 wherein the seller's host computer check
 er of credit card company for the
 for payment credit when the host computer
 ected to seller's host computer.

for payment system of purchasing goods
 wherein purchaser send purchaser's access
 of bank with his bank account number and

for payment system of purchasing goods
 wherein personal identification number
 d of using credit card number or bank
 red and used.

for payment system of purchasing goods
 where in telephone or internet is used
 d company or bank or intermediate



INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5715314 A (OPEN MARKET INC.) 3 Feb. 1998 see entire document	1-11
Y	US 5890137 A (N.K. KIKAKU) 30 Mar. 1999 see entire document	1-11
A	US 5727163 A (AMAZON. COM INC.) 10 Mar 1998 see entire document	1-11

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